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AUTHOR Barton, Paul E.
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ABSTRACT

This brief report addresses two issues. One is the stagnation in the rate at which young people are receiving 4-year college degrees, and the increasingly high financial barriers to attending college. The other is the large, and increasing, inequality in opportunity to achieve a college education. At the same time, economists have warned that our economy increasingly needs the skills obtained in college, and that income for people with less than a 4-year degree is declining. Educational attainment among young adults has been flat for two decades, with the percentage of young adults who have completed high school holding steady at about 86 to 87% and the number of students completing 4 years of college holding at around 23-25%. The staircase to higher education is getting harder to climb as costs advance sharply. In addition, most students who start higher education do not get a degree. Of those who entered college in 1989, seeking a bachelor's degree, 46% had a 4-year degree 5 years later and about 18% were still enrolled. Exodus from college begins early and is high between the freshman and sophomore years. When all negative factors are factored in, higher cost, stagnating income, declining aid, and high dropout rates, the result is a growing disparity in students' ability to earn a postsecondary degree. Efforts to improve this situation must start early, assuring high school graduation and removing in equalities in education at elementary levels as well. Disparities in educational achievement at elementary and secondary levels must be addressed through setting standards, allocating resources, and addressing socioeconomic and family-level causes. For national as well as individual well being, there is a strong case to be made for greater participation in higher education. (SLD)

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A POLICY INFORMATION PERSPECTIVE

Toward Inequality

by Paul E. Barton

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October 1997

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PREFACE

This brief report addresses two issues. One is the stagnation in the rate at which young people are receiving four-year college degrees, and the increasingly high financial barriers to attending college. The other is the large, and increasing, inequality in opportunity to achieve a college education. At the same time, economists have warned that our economy increasingly needs the skills obtained in college and that income for people with less than a four-year college degree is declining.

This report is published as part of the Policy Information Perspective series, in which authors present research findings as well as offer their interpretations regarding the meaning of those findings for private and public policy. The views expressed are those of the author.

Paul E. Barton
Director
Policy Information Center

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Richard Coley prepared the charts and graphs, Carla Cooper provided the desktop publishing, Loriann Fell did the editing, Gil Howard designed the cover, and Jim Chewning coordinated production.

The Steeper Stairs of Higher Education

There is widespread agreement that, in our economy and society, a college education is highly desirable.

Among high school seniors the expectation of going on to a four-year college has risen from 34 percent of seniors in 1972 to 38 percent in 1982, and to 54 percent in 1992 (although considerably fewer than that went directly after graduation as originally planned). The percentage of high school seniors planning to go on to community colleges has also been rising.

- Parents — those that cannot afford it as well as those who can — want their children to go to college.

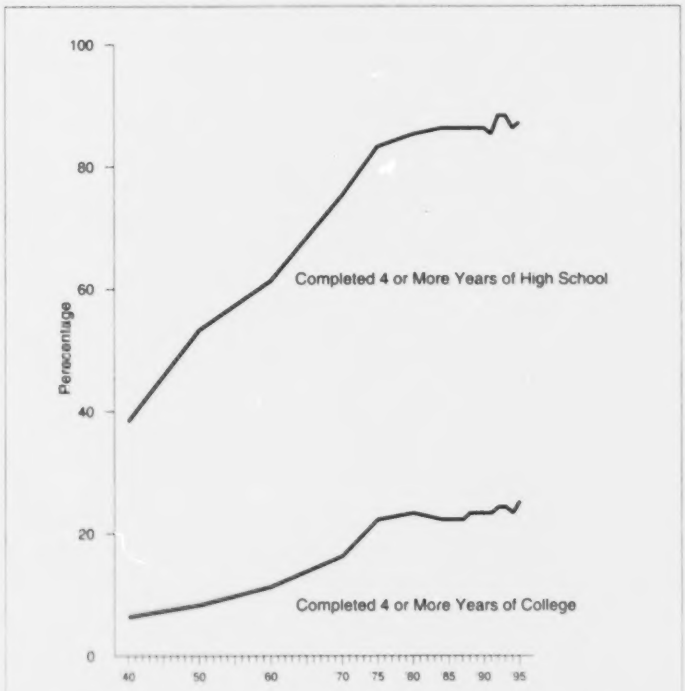
- The education system itself is geared at each level to prepare students for the next level, not for exit from the system before college.

- Finally, economists tell us that demand for college graduates is strong and that it will be even stronger in the economy of the future. Edward Denison's extensive research has established that historically 20 percent of our economic growth has been due to education. Early in 1997, 43 percent of academic economists surveyed by the *Wall Street Journal* said that to boost the economic growth rate, more "spending on education and research would give the biggest bang for the buck. Nothing else comes close."

Despite these and other pronouncements by economists about the needs of the economy for workers with ever more advanced education, educational attainment among young adults has been flat for two decades. After rising steadily until about 1976, the percent of 25- to 29-year-olds who have completed four years of high school or more has held steady at around 86-87 percent (see Figure 1). After also rising steadily, the number who have completed four years of college or more held at 23-25 percent during the last two decades. In short, if the economists are correct, and the economy's need for more highly educated workers has been accelerating, the need is not being met. (During this period of educational stagnation, productivity growth has been at an all-time low, although economists have not been able to pinpoint the reasons for it.)

For the individual, it is well established that the *relative* returns of a college education have been growing, even as the *cost* rises. Thus, for any young person coming into adulthood, the "catch 22" is that as college

FIGURE 1: PERCENTAGE OF 25- TO 29-YEAR-OLDS COMPLETING HIGH SCHOOL AND COLLEGE, 1940-1995



Source: *Digest of Education Statistics, 1996*. National Center for Education Statistics, p. 17.

becomes harder to finance it becomes ever more necessary to go, because those who do not are faring worse than ever in the labor market.[1]

This relative economic decline for non-college graduates is not inevitable. But it is the reality in the United States today, and likely tomorrow too if we continue in the same direction. The reality for the individual is shown in the stair steps of Figure 2, where increasing family income goes with increasing education, step by step.

THE HIGHER BARRIERS

The education staircase to higher earnings is getting steeper and harder to climb. The costs have advanced sharply year by year, at the same time that states have cut expenditures for higher education and the federal government has retrenched on student aid.

The average cost for tuition, fees, and room and board at four-year institutions has risen from $2,577 in 1976-77 to $10,315 in 1995-96. By 1995-96, the cost at public

[1] For a recent discussion of the individual economic benefits of education, see Anthony P. Carnevale and Donna M. Desrochers, "Community Colleges in the New Economy," *Community College Journal*, April/May, 1997, pp. 28-29.

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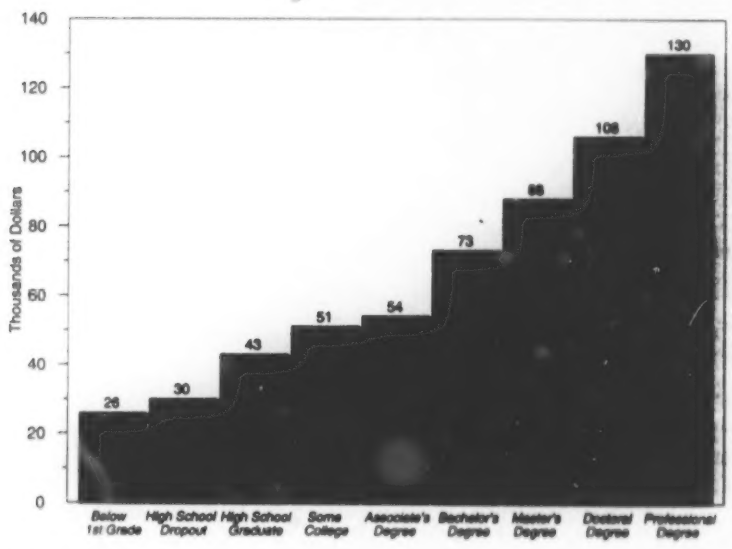
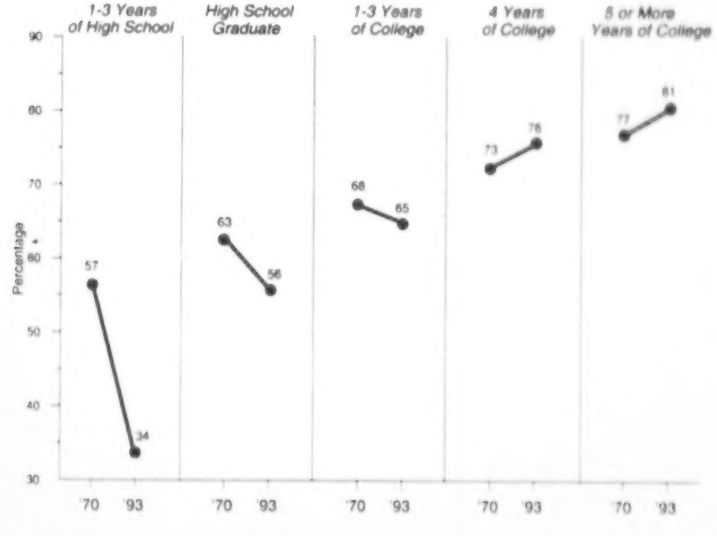
FIGURE 2: ANNUAL FAMILY INCOME, BY EDUCATION, 1995



Source: Census Bureau

FIGURE 3: DISCRETIONARY INCOME AS A PERCENTAGE OF FAMILY INCOME



Source: *Postsecondary Education OPPORTUNITY*, Number 46, April 1996, p. 16.

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institutions was $7,013, and in private institutions, $17,613.[2] These costs rose much faster than the average rate of inflation, and in excess of the consumer price index by 43 percent in public four-year colleges and 75 percent at private universities between 1979-80 and 1994-95.

These cost increases came at a time when family incomes were, on the average, stagnant. After reaching a peak in 1973, family incomes remained roughly the same through 1994, in constant dollars. Climbing college costs have become an ever-higher hurdle for parents with less than four-year college degrees whose family incomes have been declining in real dollars. In families headed by a high school dropout, real incomes declined by 37 percent, and in those headed by a high school graduate, they declined by 20 percent while the incomes of those headed by people with college degrees rose. Moving beyond the education of one's parents is getting ever harder. And the decline in "discretionary income," the income a family has beyond the federal poverty level, made the decline in family resources available for education even steeper than it appears from the decline in total income (see Figure 3). Again, those with college educations of four years or more *gained* ground, as those with less than four years of college *lost* it. As family income became more unequal, so did the family's ability to finance a college education.

Of course families — particularly lower-income families — do not pay the entire cost of a college education, and sometimes they pay none. Yet sources of financial support are drying up. First, there are the state appropriations for support to higher education and for various forms of student assistance. Since 1979, all states have reduced tax funds for higher education and for various forms of student assistance, in terms of dollars spent per $1,000 of personal income. New Mexico did the best with a decline of only 3.3 percent, but Vermont cut by over half, 53 percent. The national average was 32 percent[3] (see Figure 4).

Second is federal financial aid to students. From the 1960s into the late 1970s, it became an increasingly generous and available source of student aid, greatly expanding educational opportunity for young people from lower-income families. While still very important, it has eroded with respect to the degree that it supports students. Grants to students (Pell grants) peaked in 1992-93 at four million recipients, and declined to 3.6 million by 1996-97. In that time the dollars expended dropped from $6.2 billion to $5.7 billion, and the average grant stayed about the same, as college costs continued to rise. According to *Postsecondary Education OPPORTUNITY*, "If this year the Pell Grant maximum award covered the same share of institutional charges that it covered in FY 1980, then it would be $5,760. Today's maximum is $2,470, which buys just 43 percent of what it did in 1979-80."[4]

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[2] *Digest of Education Statistics, 1996*, National Center for Education Statistics, Table 309, pp. 320-321.
[3] *Postsecondary Education OPPORTUNITY*, Number 53, November, 1996, p. 6.
[4] *Postsecondary Education OPPORTUNITY*, Number 51, September, 1996.

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FIGURE 4: PERCENTAGE DECREASE FROM FY 1979 TO FY 1997
IN THE APPROPRIATION OF STATE TAX FUNDS FOR OPERATING EXPENSES
OF HIGHER EDUCATION PER $1,000 OF PERSONAL INCOME

Source: *Postsecondary Education OPPORTUNITY*, Number 53, November 1996, p. 6.

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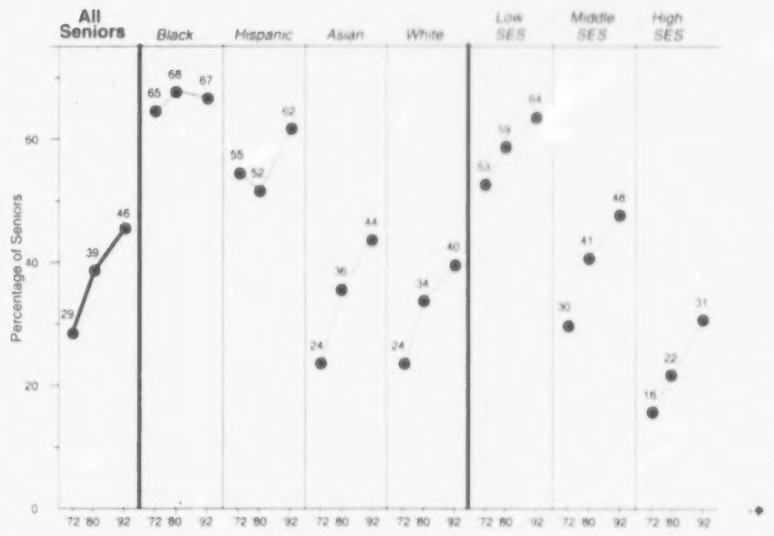
FIGURE 5: PERCENTAGE OF HIGH SCHOOL SENIORS WHO SAID FINANCIAL AID WAS 'VERY IMPORTANT'



Source: *Trends Among High School Seniors*, National Center for Education Statistics, 1995, p. 44.

Not surprisingly, concern about affordability has skyrocketed among high school seniors (see Figure 5). In 1972, 29 percent of high school seniors said that the availability of financial aid was "very important" to them. By 1980, that percent had risen to 39 and by 1992 it was 46 percent. Among 1992 seniors from low-income families, it was 64 percent, up from 53 percent in 1972. But concern was growing about financial aid among middle and higher class students as well, and for Black and Hispanic students, it was high throughout this period.

The stairs of higher education are likely to continue getting harder to climb. According to the recent report by the National Commission on National Investment in Higher Education, a growing shortfall in public funding may force the nation's colleges and universities to turn away half the student population by the year 2015. Chair and former governor of New Jersey, Thomas Kean declares, "Millions of Americans will be deprived of the opportunity to go to college, because of the combined effect of enrollment growth, a six-fold increase in costs, flat funding, skyrocketing tuition, and shrinking resources." On the tuition side, a just-appointed (July 1997) National Commission on the Cost of Higher Education will report to the congressional education policy committees handling student aid in four months.

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Leaks in the Higher Education System

Getting started on a college education is only part of the solution to expanding opportunity. If we want to increase college educations, we have to do more than create opportunities for more 18-year-olds to enter college.

As the system operates now, higher education dips deeply into the pool of high school graduates with a sieve. The majority leak through before graduating. And it is getting worse, not better. Of students who started at community colleges in 1989, just 37 percent had attained any degree five years later, and only 6 percent had attained a bachelor's degree. Another 15 percent were enrolled in a two- or four-year college, while 49 percent were no longer enrolled (see Figure 6).

Of those who entered college in 1989 seeking a bachelor's degree, (whether or not they initially entered a two- or four-year college) 46 percent had a four-year degree five years later (another 5 percent had an associate's degree, and 3 percent a certificate). Another 18 percent were still enrolled, and 28 percent had no degree and were no longer enrolled. This longitudinal survey just began in 1989, so we have yet to see how many of the 18 percent will go on to earn degrees. If half do, then just over half of all those who sought four-year degrees will have completed them.

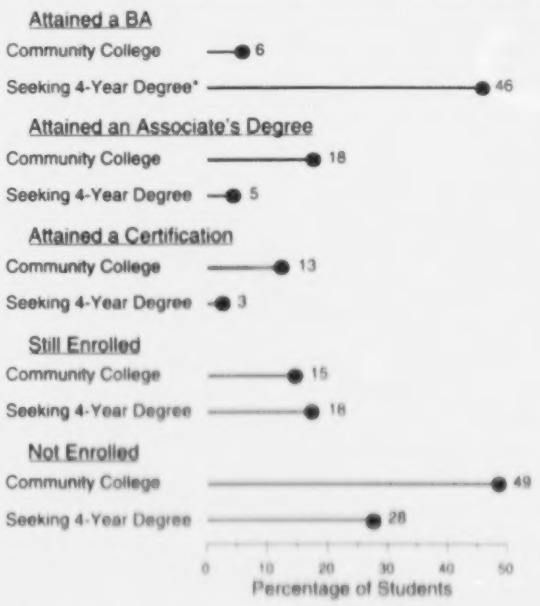
Whether or not those who enter secure a degree is very closely related to socioeconomic status. Females are more likely to complete college than males. White students more likely than Black or Hispanic students, and younger students more likely than older. Those who did not delay entry into college have a better chance of graduating than those who did, and those who had higher grade point averages are more certain of finishing than those with lower averages.

For those Americans setting out to climb the income ladder armed with a college education, the chances of succeeding are about those of flipping a coin, considerably better for students from higher income families and considerably worse for students from the bottom fourth in socioeconomic status ranking. For them, whether they enter a community college or seek a four-year degree, only about 3 in 10 will make it (see Figure 7).

Exodus from college begins early, is high between the freshman and sophomore years, and varies considerably by the type of postsecondary education. In 1993, the percent of students who had persisted from their freshman to sophomore year varied from 83 percent in private universities offering a Ph.D., to 67 percent in public colleges offering a baccalaureate degree, down to 52 percent in public two-year institutions (see Figure 8).

Of course, continuation rates vary considerably among schools of each type; the variance rates (standard deviations) rank in

FIGURE 6: FIVE-YEAR OUTCOME COMPARISONS BETWEEN STUDENTS ENTERING COMMUNITY COLLEGES AND STUDENTS SEEKING A FOUR-YEAR DEGREE



*This includes all who entered seeking a four-year degree, whether they initially entered a community college or a four-year school.

Source: *Postsecondary Education Longitudinal Survey*, Digest of Education Statistics, 1996, National Center for Education Statistics, Table 307.

about the same order as the persistence rates. The percent of freshman continuing into their sophomore year was 91 percent at highly selective institutions, 82 percent at selective ones, 72 percent at traditional, 66 percent at liberal, and 54 percent at open enrollment institutions.[5] Again, there is considerable variation within categories. In the middle of the range, "traditional" colleges where the majority of students come from the top half of their high school graduating classes, over a quarter are gone at the end of their freshman year. A third of freshman leave the liberal colleges not classified as selective.

These rates are not just high,[6] *they are getting higher.* Overall, the freshman to sophomore continuation rate declined slightly from 1983 to 1995, from 68 percent to 66.9 percent. But it declined by two percentage points or more in private bachelor's, public bachelor's, and private master's institutions. The largest declines are recent. From 1991 to 1995,

[5] In highly selective institutions, the majority are in the top 10 percent of their high school graduating class. It is the top 25 percent for selective, and the top half for traditional. In the liberal category, some are accepted from the lower half.

[6] These trends are taken from *Postsecondary Education OPPORTUNITY*, Number 4, February 1996.

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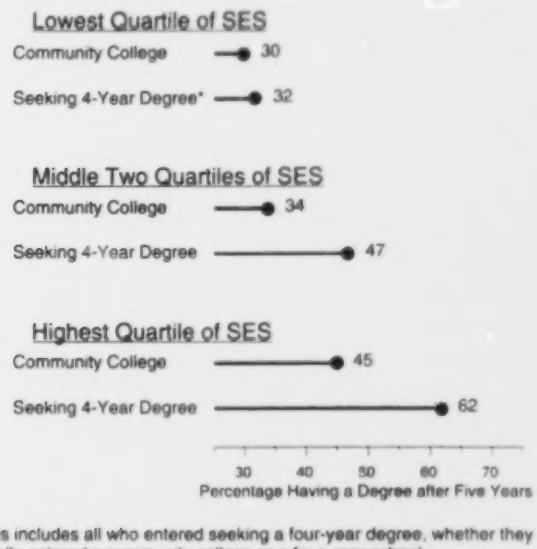
FIGURE 7: PERCENTAGE OF STUDENTS ENTERING COLLEGE IN 1989 THAT HAD ANY DEGREE AFTER FIVE YEARS



*This includes all who entered seeking a four-year degree, whether they initially entered a community college or a four-year school

Source: *Postsecondary Education Longitudinal Survey*, Digest of Education Statistics, 1996. National Center for Education Statistics, Table 307.

continuation rates were stable at highly selective institutions, but declined 1.5 percentage points at selective and traditional schools, .6 of a point at liberal institutions, and .7 of a point at open enrollment institutions.

Another important consideration is the extent to which those who enter four-year colleges persist to attain a four-year degree. Such measures are found in the extensive work of Alexander Astin and his colleagues, the most recent effort being a report issued in September 1996.[7] It measures the extent to which entering freshman attain a bachelor's degree within four, six, or nine years of entry, from the school in which they initially enrolled.*

Of those who entered in the fall of 1985, just 39.9 percent had a bachelor's degree within four years, 44.9 within six years, and 45.7 percent within nine years. The lowest percent to earn a degree in four years was 30.6, at the public colleges, and the highest was 69.2 percent, at the private universities. Not only are these very large leaks in the pipeline, they are getting larger. In a

[7] Alexander W. Astin, Lisa Tsui, and Juan Avalos, *Degree Attainment Rates at American Colleges and Universities: Effects of Race, Gender, and Institutional Type*. Higher Education Research Institute, University of California, Los Angeles, CA. September 1996.

* Therefore, it does not include those who transferred from one four-year institution to another, and then completed.

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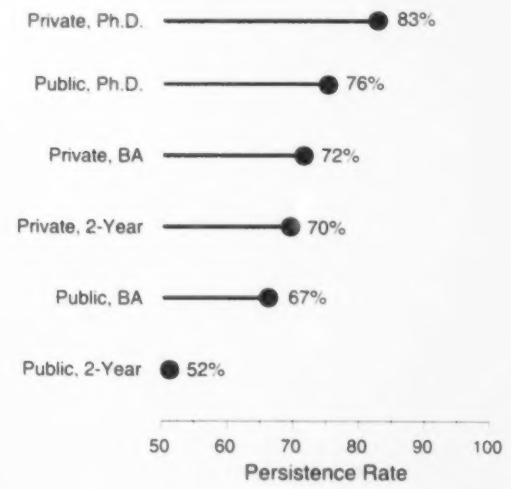
FIGURE 8: FRESHMAN TO SOPHOMORE PERSISTENCE RATE, 1995



Source: *Postsecondary Education OPPORTUNITY*, Number 44, February 1996, p. 1.

comparable study of students entering college in the fall of 1966, 46.7 percent had a bachelor's degree four years later, compared with 39.9 percent in the recent study.[9]

The rates of completion vary by high school grade point average, by SAT scores, by gender (with women more likely to complete), and by race. Together, Astin et al., found that these variables "account for the bulk of the variance in degree completion that can be predicted from entering freshmen characteristics." They recommend that colleges use these variables to estimate *expected* continuation rates, since they are likely to have this information readily available.

In fact, the April 1997 issue of the *Postsecondary Education Opportunity* newsletter used this approach to compare the estimated and the actual completion rates and rank 1,106 public and private bachelor degree-granting colleges and universities "according to their success (or failure) to graduate the students they admit."[10] For each institution, the newsletter provides an expected and an actual rate. The top ranking school has an expected graduation rate (within six years) of 40 percent, and an actual rate of 77 percent. The bottom ranking school has an expected rate of 75 percent and an actual rate of 21 percent. The Astin model predicts attrition rates very well, but the "outliers" show just how often institutions can have an attrition rate far above, or far below, what would be expected based on the demographic makeup of their student bodies. We are interested in what colleges and universities do to retain students until

[9] The earlier study did not track the students six and nine years later.
[10] *Postsecondary Education OPPORTUNITY*, March, 1997, p. 10.

graduation, given the makeup of their student bodies.

The most intensive study of students' leaving college is the work of Vincent Tinto, who summarizes the results of many studies in his book *Leaving College: Rethinking the Causes and Cures of Student Attrition.*[11] Tinto points out that attrition rates are not just the reflection of financial ability:

> "... *there is little direct evidence to support the claim that finances are, in and of themselves, significant determinants of student departure though some researchers have noted a small, but sometimes inconsistent, impact of financial aid upon persistence ..., the general conclusion is that financial aid is not a central element ...*" (p. 80).

The research shows that a lot of factors associated with leaving school are the product of the culture of particular colleges, or of factors within the control of the college. For example, "It is of little surprise to discover that institutions with low rates of student retention are those in which students generally report low rates of student-faculty contact" (p. 66). A feeling of isolation in a school is another important factor. In fact, there are many factors involved, and this short report cannot explore them. The point is that institutional cultures and practices greatly affect continuation rates.

National policy to increase and equalize students' opportunity to enter college is the first wave in an offense against the stagnating completion rates and rising income inequality that are roadblocks to attaining a degree. But the above data clearly established that it is not enough to get more students into college; we have to simultaneously work on getting more *through* college, and that requires approaches beyond financial aid.

The Growing Inequality

When all the negative factors are factored in — higher cost, stagnating income, declining aid, and high dropout rates — the result is growing disparity in students' ability to earn a postsecondary degree. While there is agreement that the trend is adverse, at this time there are no accurate estimates of exactly how adverse it is. One recent estimate, published about two years ago in *Postsecondary Education Opportunity*, received considerable attention. It stated that in 1979, a student age 18 to 24, from the top income quartile was four times more likely to obtain a four-year college degree by age 24 than a student coming from the bottom quartile; by 1994, he or she was 10 times more likely to get a degree. However, the consensus among experts, and the author as well, is that the method used was flawed, and resulted in an overestimate of the gap. New estimates are underway, but are not yet available.

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[11] Published by the University of Chicago Press, 1987, with a revised edition in 1994.

Antecedents

Much of the chance for a high school graduate to get a college education is shaped by opportunities that open, or do not open, around age 18, which is the focus of the earlier discussion. However, much of the ability to take advantage of such opportunities is shaped long before age 18.

An effort to increase equality of opportunity to pursue higher education must start long before students reach that age, if it is to be effective. All that is done at age 18 and after will help but its effect will be considerably limited unless efforts start earlier.

Increasing High School Graduation

First, the chances of going to college are dim if an 18-year-old (or 20-year-old, for that matter) has not received a high school diploma. By the normal graduation age, about one in four people do not have a high school diploma. This percentage decreases as dropouts complete GEDs.[12] Helping dropouts complete high school is one important element of any effort to raise the college attendance rate, particularly if the goal is to increase equality of opportunity.

In terms of equality, the bright spot has been in the steady climb in the number of Black students earning a high school diploma; the rates between young White and Black Americans are now about equal. The bad news is that the proportion of all young adults with a high school diploma has hardly changed at all for two decades, and the differentials by socioeconomic status persist, according to *Postsecondary Education OPPORTUNITY*[13]:

> *"... this basic pattern has persisted without interruption for every one of the last 20 years. Very modest increases in high school graduation rates in the bottom quartile have been at least partially offset by modest declines in the rate for those from the second quartile of family income."*

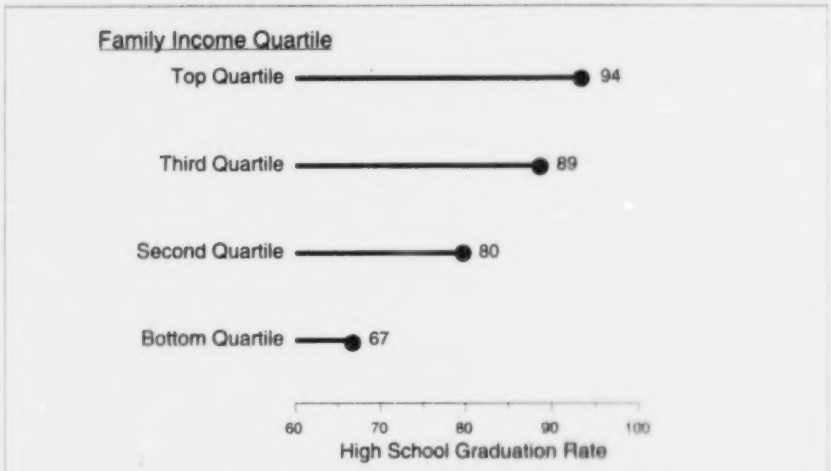
The top two quartiles gained slightly. However, the differences in high school graduation are not only persistent, but considerable (see Figure 9). The high school graduation rates of students in the lowest quartile are more than 25 percent lower than the high school graduation rates of students in the highest quartile.

The stagnation of high school graduation rates and the persistence of the differentials among students offer little hope that the natural course of events will increase the pool of college eligibles. A policy to raise participation in postsecondary education and increase equity should not ignore the need

[12] The GED is a test given under the auspices of the American Council of Education, and is used to award a certificate equivalent to a high school diploma.

[13] *Postsecondary Education OPPORTUNITY*, Number 41, November, 1991, p. 4

FIGURE 9: HIGH SCHOOL GRADUATION RATES FOR UNMARRIED 18- TO 24-YEAR-OLDS, 1994



Source: *Postsecondary Education OPPORTUNITY*, Number 41, November 1995, p. 5.

for getting the high school completion rate up for those from the bottom half of the income distribution.

An often-used alternative to a traditional high school diploma, mentioned earlier, is the GED. Getting a GED can open doors to more advanced education and training, but there has been some debate in the academic community about how much the GED helps. Richard Murnane and his colleagues recently published the results of a study that relied on the National Longitudinal Survey of Youth, for the years 1979-1991. They conclude that "we find positive effects on the rate of wage growth ... The pattern of findings suggests that the benefits of GED acquisition may come from the impetus that it provides for entry into skill-enhancing training programs or possibly for job search."[14]

FROM A SINGLE PATH TO PATHWAYS

Unlike most of the developed countries with which we compete, the United States has — by and large — laid out just *one* path to success in the economy. That path is higher education, preferably with at least a four-year degree, but with economic recognition going as well to the two-year associate's degree. How deeply this is ingrained in our culture was signaled by President Clinton's State of the Union message in January 1997, which included his proposal that all 18-year-olds should have the financial capability to go to college.

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[14] Richard J. Murnane, John B. Willett, and Kathryn Parker Boudett, "Do High School Dropouts Benefit From Obtaining a GED?," *Education Evaluation and Policy Analysis*, Summer, 1995, p. 144.

This goal is hard to fault, for college is seen in the United States as the guarantee of the "good life," and the way to avoid the "bad" jobs — either from the standpoint of earnings or social status. Many American working class families hope that their children will get a job where they will "wear a white shirt" and that has usually meant further education.

Past experience has made us wary of efforts to create other paths. The experience has been, or the fear has been, that "vocational education" is used to track young people into lesser-status jobs, and close off opportunity for college. Over the last decade the school-to-work movement, strong in many states, and supported by federal legislation that provides modest financial support, has struggled to create other pathways. But the movement has loudly proclaimed that all youth should be prepared to enter college, if they so choose. Further, many designers of school-to-work programs have incorporated a postsecondary education phase, and many argue that postsecondary education is necessary for *all* participants in school-to-work programs. Thus, even efforts at improving school-to-work transitions often emphasize the importance of a college education.

These school-to-work programs emphasize the use of the worksite as well as the classroom, and are inspired by the large-scale use of the apprenticeship approach in Europe, and particularly in Germany. This effort ties in to the President's proposal to raise postsecondary education participation in two ways:

- Having school-to-work alternatives that bring good jobs within sight of high school graduates is a way to increase the high school completion rate, and thus enlarge the pool of those prepared to go to college.[15] When high school students see graduates who land only dead-end jobs, they have less incentive to graduate. (The extensive works of John Bishop at Cornell University have documented this.)

- Recognizing the need for other pathways than a traditional college education broadens the scope of what extended preparation beyond traditional high school might consist of. Desirable forms of extended education, other than just entry into traditional colleges, should be encouraged. One might be extending the period of public schooling to include substantial worksite education and training. Another could be to encourage employers to give more training/education to beginning workers, who now get the least of all, in a system that does less training overall than the countries with which we compete.

Creating new pathways commands very few federal dollars — for aid to school-to-work programs, increasing the integration of academic and occupational education, and facilitating articulation agreements between

[15] Particularly where there are efforts to integrate academic instruction with occupational training and worksite experience.

high schools and community colleges. The amounts now provided are paltry in comparison to the billions being discussed for traditional college financial aid. A word of caution is in order, however. The rhetoric of achieving high academic standards in school-to-work programs must be realized in practice. Otherwise, the promise of qualification for postsecondary education will not be met, and fears of tracking could become a reality.

The emphasis on the "traditional path" has been so intense that there has been slippage even in existing occupationally oriented postsecondary education. In 1972 9 percent of high school seniors planned to attend trade or technical school; by 1992 it was only 4 percent.[16] In 1992, just 6 percent of seniors planned to go to a two-year vocational school, the same percentage as in 1980, and this was during a period when the number of students planning to go to a four-year college was rising sharply.

The bind is that the economy *needs* advanced occupational and technical skills. Shortages abound in some occupations. Yet many 18-year-olds start down the traditional college path and end up with just a year of attendance, no certification, and no saleable skill. The challenge to creating *desirable* pathways is considerable, but such new pathways are badly needed, both by young adults and the economy as a whole.

Disparities in K-12 Education

A tracing of the sources of inequality in access to higher education would be incomplete without commenting on its emergence early in the family and schooling experience. Increasing equality in obtaining college degrees is, in part, dependent on increasing the equality of educational attainment in elementary and secondary schooling, for those nearer the bottom are not going to get into college, or complete it, financial aid or not. Inequality in terms of educational achievement at early ages is embedded in the American system, rooted deeply in family, school resources, and school effectiveness. President Clinton also recognized shortcomings in K-12 education in his State of the Union message, and advanced corrective actions.

There is a large degree of denial in the United States about how wide the range of achievement among students in any one grade of school is. The fact is, the disparity is so great that the idea of "grade level" itself — such as the fourth grade, or the eighth grade, grades that figured prominently in the State of the Union message — is not as important in the United States as is generally thought.

The wide dispersion of achievement within a grade, and the overlap in the distribution of achievement among grades, is conveyed in Figure 10, which has been

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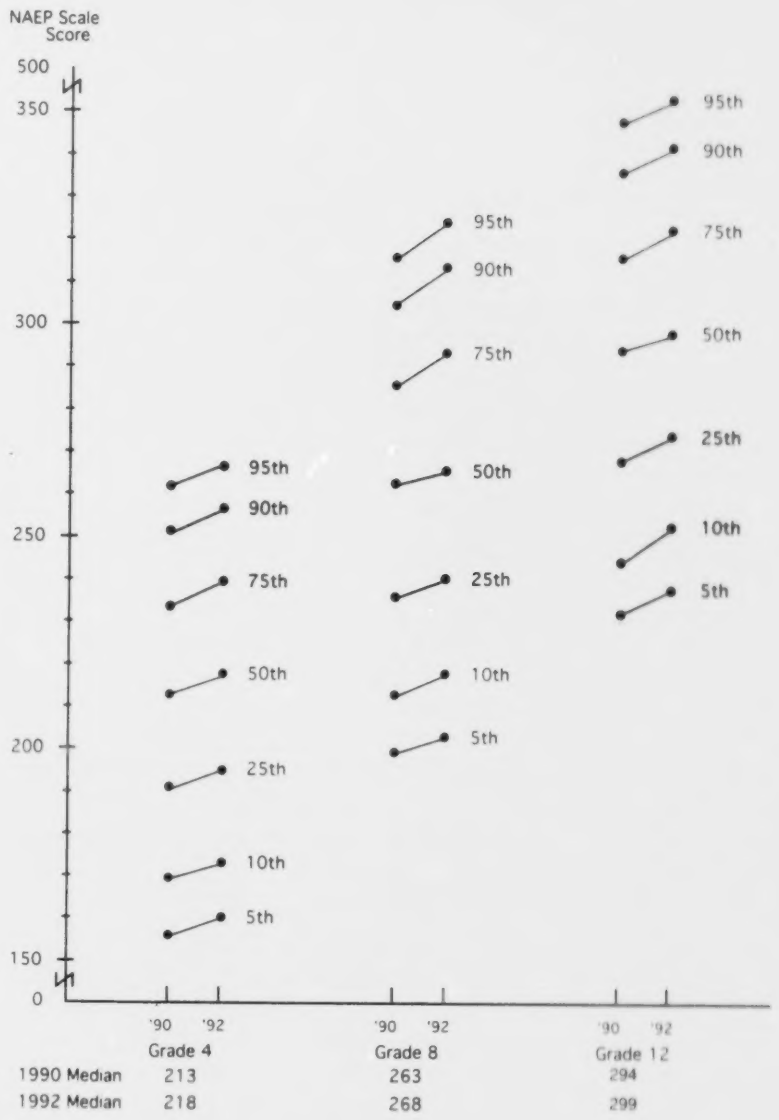
[16] The *number* of trade schools declined from 8,500 in 1988 to 6,250 in 1996. Enrollment data are not available.

FIGURE 10: PERCENTILE DISTRIBUTIONS FOR MATHEMATICS PROFICIENCY FOR 1990 AND 1992, BY GRADE



Source: Data are drawn from Ina V.S. Mullis et al. *NAEP 1992 Mathematics Report Card for the Nation and the States*. National Center for Education Statistics, Educational Testing Service, April 1993.

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reproduced from a 1993 issue of *ETS Policy Notes*. Fourth grade students at the 75th percentile are about even with 8th grade students at the 25th percentile, and also with 12th grade students at the 5th percentile. The overlap between 8th and 12th graders is even larger. Apparently, at least in mathematics, students progress more between grades 4 and 8 than they do between grades 8 and 12. With this much overlap over four grades, the overlap from one grade to the next is huge.[17]

Improving the quality of schooling is high on the nation's agenda, and has been since the early 1980s. A standards and assessment driven reform movement has been gathering steam, and holds promise of raising educational attainment. The earliest efforts, the mathematics standards established through the work of the National Council of Teachers of Mathematics, have now begun to show results in raising achievement. The focus has been on "content" standards that establish what students should know and be able to do.

The next step of setting "performance" standards — establishing specifically *how much* students should know and be able to do — is well behind the development of these content standards. Here, we will need to face directly the large disparity in the achievement of students in any single grade level. This disparity makes it difficult to conceive of a "single standard," in terms of performance on an assessment, that all students would meet, without change in the allocation of educational resources and in the educational achievement differences that seem to parallel differences in the socioeconomic status of families. The National Education Goals, set by President Bush and the nations' Governors in 1989, set out to "raise achievement in each quartile," and to narrow achievement gaps. In Figure 10, we see how the whole distribution raised a bit from 1990 to 1992. It raised further in 1996.

An increase in effort may raise the distribution, but it will take much more effort and resources to *narrow* the distribution by raising those in the bottom half faster than those in the top half. The discussion as to whether greater resources can do this is polarized among politicians, academics, and lawyers. Evidence is emerging that some kinds of expenditures make a difference and others do not.[18] It is also clear that what should be adequate resources can be wasted.

But looking beyond the school walls, greater equality in educational attainments will not be achieved without recognizing the huge role that family, and the socioeconomic class of the families in which students are raised, plays. In 1965, the historic report by James Coleman, *The Equality of Educational Opportunity*, established that about two-thirds of achievement differences were accounted for by family differences in socioeconomic opportunity. The recent

[17] Four grade levels, however, make a very large difference in achievement. Eighty-two percent of the variation among the students in grades 4, 8, and 12 is accounted for by the grade level.

[18] See Harold Wenglinsky, *When Money Matters: How Educational Expenditures Improve Student Performance and How They Don't*. Princeton, NJ: ETS Policy Information Center, 1997.

study by Wenglinsky, referenced earlier, had similar findings. We are accustomed to these gradations of student achievement that match gradations in family socioeconomic status. They are so pervasive and well-known that researchers "control" for these differences when they study education; they want to know what school factors (the other one-third) make a difference, after socioeconomic differences have been separated out.

If we want to reduce educational inequality we will have to get beyond these family factors to identify the actual behaviors, supports, and circumstances that cause these differences in academic success. With few exceptions, this has not been addressed by research on educational achievement and opportunity. And it has not been addressed by public policy.

In Conclusion

A key ingredient of our meritocracy has been our education system. With no fixed class system, every individual has been free to rise to her or his potential.

Not all, by any means, have started on equal footing, and not all, by any means, have had equal opportunity, either because of different life circumstances or outright discrimination. But historically if one could negotiate one's way through, and up, the system, one was applauded for doing so and rewarded with a higher income. The principal engine for advancement was education.

For any individual, it still is. While it is hard to say who will emerge from the lower levels of income and "socioeconomic status," or why one person does and one does not, it happens in America, day in and day out. But in the last couple of decades, there has been a change in the range of opportunity for those from lower income groups as a whole, and in comparison to young people from higher income families. While the 1960s and 1970s, for a variety of reasons, including the intervention of government, saw an increase in access to higher education for those in the lower half of the income distribution, such opportunity is no longer growing.

There was a time, before World War II, when going to college was for the most part a matter of private policy and family financial capability. To be sure, states supported higher education and the federal government played an important role, through land grant colleges, for example. But aid to *individuals on a large scale* came first with the GI Bill and then, a couple of decades later, with student loans and grants. Higher education opportunity became a matter of private *and* public policy.

The relative decline in opportunity therefore has a large public policy component, as the portion of college expenses covered by financial aid is being reduced and states reduce supports for public higher education, forcing more costs to be paid by tuition charges. Also, federal tax policies, economic restructuring, and the workings of a global economy have changed the patterns of income distribution, and the relative ability to pay for college.

But the extent of opportunity available to 18-year-olds who want to enter college is only a very large tip of a very large iceberg. Whatever one's financial prospects for entering college at age 18, much of that person's capability to succeed in achieving a college education was determined long before that. The disparity in high school graduation rates is little changed, in terms of family income quartiles. Elementary and secondary education have not eliminated differences in educational achievement

among socioeconomic levels, nor among racial and ethnic groups. We have not recognized the need to eliminate barriers to achievement that arise in the family, and how lack of resources affects achievement. With two-thirds of the explained variation in student achievement traceable to variation in family resources and socioeconomic status, education policy, or lack of it, encompasses the family, as well as schools.

It is likely that, in 1997, this administration, and this congress, will give serious attention to increasing opportunity for 18-year-olds to enter college, as well as to improvements in K-12 educational achievement. But if the goal is to reduce the disparity in the attainment of a college degree, there are a few critical issues that need to be addressed:

- The formulation of financial aid to increase the opportunity for 18-year-olds to enter college should take into account the large existing inequality in opportunity, in terms of family income, and the fact that inequality has been steadily increasing. For example, tax credits can help middle income people, but can miss students from lower income families. Families that pay little or no taxes cannot be helped by generous tax credits. Even those with incomes sufficient to reap the rewards of tax credits must be able to foot the bill until income tax return time, and many will not be able to handle these large up-front costs.

These issues are being debated. The question is how to strike an appropriate combination of approaches that expands opportunity broadly and at the same time begins to redress the balance in opportunity along the family income distribution.

- Financial aid that ignores the established college completion pattern will fall far short of increasing the intended achievement of degrees. More students *starting* college will mean high proportions who are not *finishing*. They will often end up with neither an academic or an occupational credential, and owe money on college loans as well. High college noncompletion rates have largely been ignored in discussions of access to a college education. They must be addressed directly, and the spotlight should be focused on institutions with noncompletion rates higher than expected, based on the makeup of their student bodies.

- Large differences in *high school completion rates* make differences in college entry rates inevitable. In the United States, 95 percent of students from the highest income quartile graduated from high school, compared to 67 percent from the bottom quartile. *These disparities show no signs of change.* A policy of achieving greater equality of opportunity with regard to higher education should encompass strategies for increasing high school graduation in the bottom half of the income distribution scale.

- Disparities in educational achievement are virtually a stationary feature in our K-12 education system. These distributions in achievement within a single grade are not only huge, they overlap, grade by grade.

Success in addressing these disparities has much to do with overcoming later disparities in opportunity for higher education. There are three principal elements.

1. Emerging "content" standards show promise of raising K-12 achievement and need to become widespread. "Performance" standards, however, face real challenges, particularly at the national level, given the existence of large disparities in achievement within a grade. The idea of a single performance standard strains credulity when one confronts the dispersion in achievement shown in Figure 10. Standards that are too low will encourage mediocrity at the high-achieving end, while standards that are too high will leave many students behind.

2. It is also difficult to believe that these huge disparities in achievement can be eliminated without directly confronting the disparities that exist in the amount of resources applied in schools systems and in the classroom. More money can well be wasted, and existing money can be better spent, but the availability of *adequate* resources that are *effectively* applied will be necessary for any catching up — particularly since achieving "world class" standards means that those on top will also be improving.

3. The disparities in educational achievement that spring from the family, and disparities in the socioeconomic levels of families, can hardly be ignored. Research tells us that two-thirds of the differences in student achievement are accounted for by family factors. Yet neither research nor policy effectively address them.

The last two decades have seen the emergence of a more knowledge-based economy, and economists and forecasters have told us that more education is needed to maintain a competitive, high-performance economy. Yet this same period has revealed stagnation, both in the proportion of young adults who earn a high school diploma and in the proportion who earn a four-year college degree, after both measures trended upward throughout most of our history. The arguments are strong that the nation needs to start moving again on the educational achievement front.

Worse, in these two decades of overall stagnation, opportunity has become more unequal. In terms of getting degrees, the gap has widened between youth from high and low income families, and college attrition rates are staggeringly high and likely rising. A stimulus to education needs to address

the matters of both quantity and equity simultaneously. To do this, both college *entry* rates, *and* college *retention* rates must be influenced. At the same time, more pathways to good jobs need to be opened through quality school-to-work and youth apprenticeship programs, while maintaining high academic standards.

And such policies need to reach back to the years *before* students reach age 18, the traditional college-going age in the United States. What happens earlier heavily determines the shape of opportunity later. The high school dropout rate varies by family income level, and the gaps are not narrowing. In terms of achievement in K-12 education, there is wide variation at any one grade level, and resources are distributed unequally. This situation will not permit "catch-up" by those near the bottom. The standards-driven reform movement is well underway, but it has a long way to go. The role of the family — and its resources — are largely ignored, both in terms of research and policy.

In terms of both national well being as well as the needs of American youth, there is a strong case to be made for greater participation in higher education, achieved in such a way as to reverse the drift over the last two decades towards increasing inequality of opportunity.

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